

**REMARKS**

In the Official Action, the Examiner rejected claim 11 under the first paragraph of 35 U.S.C. §112 and also rejected various groups of claims (except claim 10) as allegedly being anticipated by DeBoer et al., U.S. Patent No. 6,110,645, or as being obvious over this patent combined with Vermeersch et al., U.S. Patent No. 6,210,857, or newly cited Inno et al., U.S. Patent No. 6,500,599.

By the present Amendment, claim 11 has been amended to specify that the hydrophilic resin contained in the water-receptive layer does not contain a cross-linking agent and is not cross-linked which should meet the §112 rejection, particularly in light of the Examiner's statement bridging pages 2 and 3 of the Action. As to the rejections based on DeBoer et al., applicant initially notes that the present invention relates to a heat-sensitive lithographic printing plate precursor having on a support (1) an ink-receptive layer comprising an oleophilic organic high molecular compound and (2) a water-receptive layer easily allowing removal by a fountain solution or printing ink when heated, which are present in the defined order, with the water-receptive layer being a layer formed using a coating solution comprising a solvent capable of dissolving the organic high molecular compound of the ink-receptive layer in a proportion of 1 to 40 wt. % of the total solvent in the coating solution. The claimed solvent provides an important effect in the present invention in that it enables the water-receptive layer and the ink-receptive layer to be dissolved at the interface between the layers or permits the water-receptive layer to penetrate into the interface of the ink-receptive layer that is swollen by the solvent and the adhesion between the two layers is thereby increased relative to the situation wherein the

defined solvent is absent. As explained in the previous Amendment, such advantageous result can be understood by comparing the Inventive Examples with Comparative Examples 1 and 2 on pages 38 and 39 wherein the solvent capable of dissolving the organic high molecular compound of the ink-receptive layer is absent and background stain occurred in a relatively short printing period.

Applicant respectfully maintains that DeBoer et al. does not meet or render obvious any of the claims of record. The patent does not seek to use a solvent for the top layer which is capable of dissolving the organic high molecular compound of an ink-receptive layer, and also does not inherently provide this feature of the present invention. In particular, the Examiner has again referred to Example 3 and contended that the ethanol used therein meets the claimed solvent. In maintaining the rejection, the Examiner requested an English translation of the Japanese literature reference provided with the previous Amendment.

Pursuant to the request by the Examiner, provided herewith is an English translation of relevant parts of the previously submitted Japanese document with the translated parts indicated on a further copy of the Japanese document. As can be understood therefrom, the solubility of nitrocellulose depends on the nitrogen content and therefore from the description provided in DeBoer et al., one cannot definitively determine if the disclosed nitrocellulose is soluble in ethanol.<sup>1</sup> Furthermore, DeBoer et al. certainly does not seek to

---

<sup>1</sup> The Examiner is respectfully reminded that in order to rely on inherency, the alleged inherent feature must be a necessary result and not merely a possible result. *See, e.g., Ex parte Keith*, 154 USPQ 320 (Bd. App. 1966), *Continental Can Co. v. Monsanto Co.*, 20 USPQ2d 1746 (Fed. Cir. 1991) and *Ex parte Levy*, 17 USPQ2d 1461 (BPAI (continued...))

dissolve the nitrocellulose and unquestionably does not recognize the results which can be obtained therefrom. In this regard, the aforementioned illustrative and Comparative Examples clearly show that the defined solvent has an effect on the final product that is not present when the defined solvent is absent. Therefore, even if a product-by-process situation exists, the evidence of record supports the understanding that the process provides a substantially different product than what can be obtained in the absence of the defined solvent.

Since the rejection based on DeBoer et al. alone cannot stand, the combination of this patent with Vermeersch et al., which has been relied on to show a cross-linked polymer, does not overcome the deficiencies discussed above and therefore claims 2-4 are also patentable. This same rationale is applicable to the alternative combination of DeBoer et al. and Inno et al. which has only been relied on to teach a protective covering. Furthermore, since Inno et al. is only superficially available as "prior art" under 35 U.S.C. §102(e), applicant respectfully points out that **applicant was under an obligation of assignment to the same assignee of Inno et al. at the time the present invention was made.**<sup>2</sup> Therefore, pursuant to the provisions of 35 U.S.C. §103(c), this provides a further reason as to why this rejection cannot stand.

For all the foregoing reasons and based on the claims and evidence of record, applicant respectfully submits that the presently claimed invention is patentable in all

---

<sup>1</sup>(...continued)  
1990).

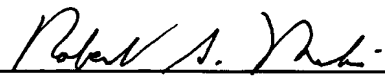
<sup>2</sup> In accordance with the provisions of MPEP §706.02(l)(2), this statement should be sufficient to establish common ownership.

regards and therefore requests reconsideration and allowance of the present application.

Should the Examiner wish to discuss any aspect of the present application, she is invited to contact the undersigned attorney at the number provided below.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By:   
Robert G. Mukai  
Registration No. 28,531

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

Date: August 6, 2003

わんだものを不食品とする。現状では65℃でBminと書いてある。

これら以外にも安定度試験法の提案はきわめて多く、目的に依りて適宜な方法を採用することが望ましく。

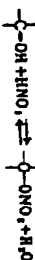
(4) 安全度 規定で暴発を抑制するときノズルや炭シンの脱落を抑制することがあるので、ガス、炭シンに対する防炭脱落の安全性を高めるため安全度試験を行い、それに合格したものを安全な炭源または規定炭源とよんでいる。

機軸の位置によつて、メカニカルな原因として、機軸の  
 大気、潤滑油不足による加熱、電磁石の  
 たるみ、機軸の位置によつて、メカニカルな原因として、機軸の  
 大気、潤滑油不足による加熱、電磁石の

## 17.2 煤炭性化合特

### 17.2.1 硝酸エステル

一般にアルコール類や炭水化物



(1) 塩化アルミニウムの場合、型内腐蝕が起すると腐蝕が激しくなり起破であるので、保護を加えて型内腐蝕を抑制した材料が採用した。

(2) 多量アルミニウムや炭水化合物の場合には、腐蝕と型内腐蝕を使用することもある。

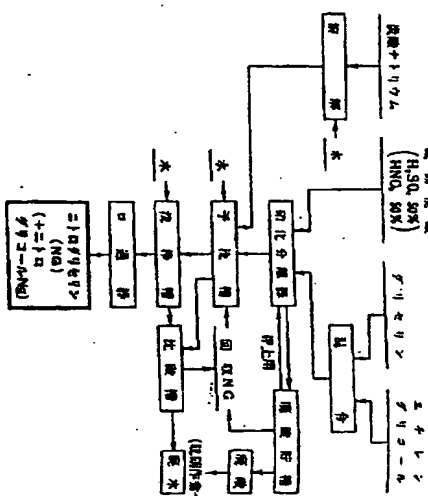
(3) 腐蝕に陥れてから、腐蝕を低下する。

(4) 腐蝕腐蝕による腐蝕。

など行われる。

[illegible]

17. 火



17.10 2107497, 2107498-2107500

硫酸エスナルは一般に不安定であり、極に低い温度や乾燥が存在すると白炭分解を起しやすいため、特によい精製する必要がある。

172 聚性化合物

1043

圖 17.8 ムトロセリド一水の結晶性、作試料と用試料

定 常 電 荷	溶 劑	性 質	ニセキニ アノール の溶解性	用 途
11.1-11.4 11.8-11.1	テトラヒ ドフラン [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
12.5-12.8	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
12.9-12.5	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
13.0-12.5	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
11.0-12.5	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
10.1-11.0	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體
10.0-10.9	95-100 [無]	不 溶 可下	不 溶	付 属 ニセキニ 無機大體

Nで表される。その境界とや重畳との関係は第17の図  
としてある。

第18の図は、 $\alpha$ の値が異なる場合に、 $\beta$ と $\gamma$ の関係を示す。

考案者リニエロは化合物を中間体とする例が多い、

### 17.2.2 ニトロ化合剤

2. 製造方法  
(1)  $\text{NO}_2$  を含むニトロ化液  
によるニトロ基の導入

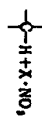
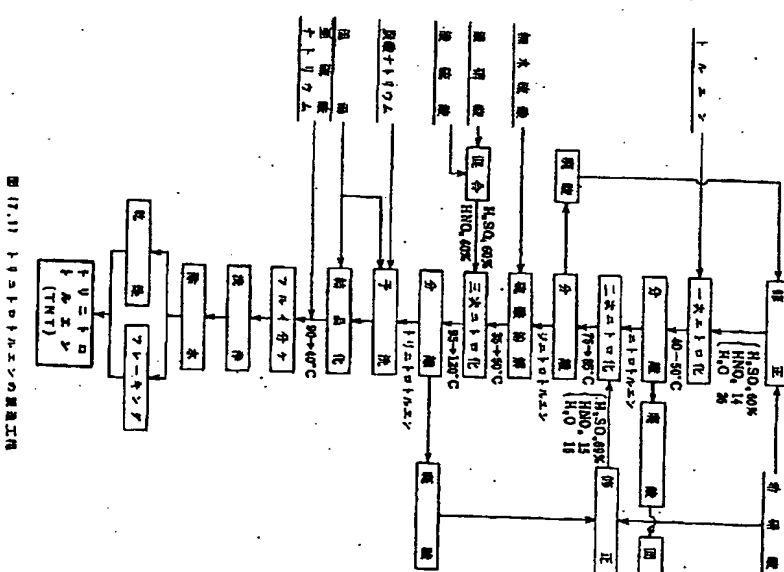

$$\rightarrow \text{—C—NO}_2 + \text{HX}$$


図 17.11 トリコトロルエソの製造工程



RECEIVED

AUG 11 2003

TC 1700

Chemical Handbook (application) Second Edition, 1965, pages 1042 to 1043 (marked-up portion)

Among the nitric acid esters of carbohydrates, nitrocellulose (NC) has industrial importance. Though NC can theoretically be the trinitrate ester (14.14% in terms of nitrogen content) through the esterification of all the three hydroxy groups in the glucose unit of cellulose, it is difficult to obtain esters with a nitrogen content of 14% or higher. The properties of nitrocellulose are closely related to its nitrogen content (N%): moisture absorption (at 25°C): W can be expressed by  $(W\% = 14.5 - N)$ , the heat of formation: HF by  $(HF [\text{cal/g}] = 1409.7 - 62.3N)$ , and the heat of combustion: HC by  $(HC [\text{cal/g}] = 4173.7 - 141.3N)$ , respectively. How the solubility and application of nitrocellulose depends on the nitrogen content are shown in Table 17.3.



RECEIVED  
AUG 11 2003  
TC 1700

Table 17.3 Nitrogen content, properties and applications of nitrocellulose

Nitrogen content [N %]	Solubility				Viscosity of Ether/ethanol solution	Application
	Acetone/ethyl acetate [%]	Ether/ethanol (2:1 in volume) [%]	Anhydrous ethanol [%]	Nitroglycerin		
13.1 to 13.4	95 to 100	Insoluble	Insoluble	Insoluble	-	Bursting charge, smokeless gunpowder
12.8 to 13.1	95 to 100	30 or less	Insoluble	Insoluble	-	Bursting charge, smokeless gunpowder
12.5 to 12.8	95 to 100	50 or less	Insoluble	Insoluble	-	Smokeless gunpowder
		50 to 95	10 or less	Insoluble	High	Smokeless gunpowder
		95 to 100	10 or less	Insoluble	High	Smokeless gunpowder
12.0 to 12.5	95 to 100	95 to 100	50 or less	Slightly soluble	High	Smokeless gunpowder, collodion
11.0 to 12.0	95 to 100	95 to 100	50 or less	Highly soluble	High	Dynamite
			50 to 100	Slightly soluble	Very low	Film
			50 to 100	Slightly soluble	Low	Celluloid
10.0 to 11.0	95 to 100	80 to 100	50 or less	Slightly soluble	Low	Celluloid, lacker
9.0 to 10.0	30 to 90	30 to 90	Insoluble	Insoluble	Low	No application